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Coal Taxonomy Thesaurus of Terms

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U.S. DEPARTMENT OF COMMERCE

NATIONAL BUREAU OF STANDARDS

COAL TAXONOMY THESAURUS OF TERMS

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ABSTRACT

This report contains a thesaurus to help public and private users find and retrieve information on regulations and standards which apply both to coal technology and to coal-related environmental, safety and health issues. Document indexers may also find it helpful. The thesaurus was designed to be structurally compatible with the document storage and retrieval systems now in use by the Department of Energy (DOE) so that absorption into DOE's system could be convenient and practical. The arrangement of the thesaurus, the code system that represents the terms used in the indexing and search processes, and instructions for its use are described. The hierarchies of index terms in the thesaurus are illustrated.

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P A R T A

I. INTRODUCTION

This report is submitted in partial fulfillment of Tasks 1.1.2a and 1.1.3 of the Department of Energy (DOE) project: Energy Standards Coordination and Development A-046. The work was done under Task Order number A-046 OES of Interagency Agreement number EA-77-01-6010 between the DOE Division of Operational and Environmental Safety (DOE/OES) and the National Bureau of Standards (NBS) Office of Engineering Standards (OES). Under this project, the NBS provides support to DOE in the planning, development and implementation of DOE Standards Management Support Systems to assist DOE's technical divisions in planning, coordinating and operating their individual standards-related program activities. The filing and retrieval of documents bearing on energy programs is such an activity.

The thesaurus in Part B of this report has a role similar to the familiar subject card index in a library. Its purpose is to guide a library user from a relatively unconstrained set of terms and concepts that apply to documents in the specialized field of the library to a much smaller set of terms and concepts that are actually used for indexing and retrieval purposes. Indexers use the smaller set called authority terms, or really the three-character codes for these terms, to describe the contents of documents in the library. The codes are convenient for computer filing, search and retrieval, but the same functions could be performed at the manual level with the authority terms themselves. The non-authority terms are called thesaurus terms. This group contains synonyms and other possibly more familiar terms that are treated as equivalents to authority terms for indexing purposes. The sole purpose of thesaurus terms is to help a user

move from his or her initial frame of reference to that used by the library. Of course, the user could save time by beginning with authority terms, either by accident or design.

This particular thesaurus is designed for a computer-based library that specializes in laws, regulations, standards and related documents bearing on environmental, safety and health (ES&H) concerns of the US coal industry. The design of the thesaurus and of the system of which it is a part is open-ended in the sense that terms may be added to accommodate new technologies and even other energy sources. Furthermore, one of the design principles was to achieve as much compatibility as practical with document storage and retrieval systems now in use by DOE so that absorption into DOE's system could be convenient and practical.

II. TECHNICAL DISCUSSION

This thesaurus is designed as an aid in document retrieval, although document indexers may also find it helpful. Details of the indexing process are described in "Coal Taxonomy Indexing Methodology - Final Report," Ideamatics, Inc., March 1981 (Reference 1).

1. A decision to include a document in the system is made if a review shows that its content is sufficiently germane to the purpose of the collection.

2. An accession number is assigned to the document. This number is unique to that document and serves as the file reference for information about the document. An accession number is never reused.

3. Indexing consists of assigning codes in seven categories (called facets) to the accession number. The facets are Source Type, Specific Source, Jurisdiction, Compliance Population, Functional Criteria, Coal, and Environmental, Safety and Health (ES&H). Only one term per facet is allowed for the first five facets, but more than one term is permitted, and encouraged, for the Coal and ES&H facets. The thesaurus in Part B covers Coal and ES&H terms that were considered useful in indexing a test sample of documents, and also includes a limited number of terms that are expected to be useful, but that were not needed in the test. Procedures for adding terms are described in Reference 1.

There are two levels of Coal and ES&H terms in the thesaurus. These are defined in Reference 1 as "authority" terms and "thesaurus" terms. Each authority term has its own three-character alphanumeric code that represents the collection of concepts covered by the term in the indexing and search

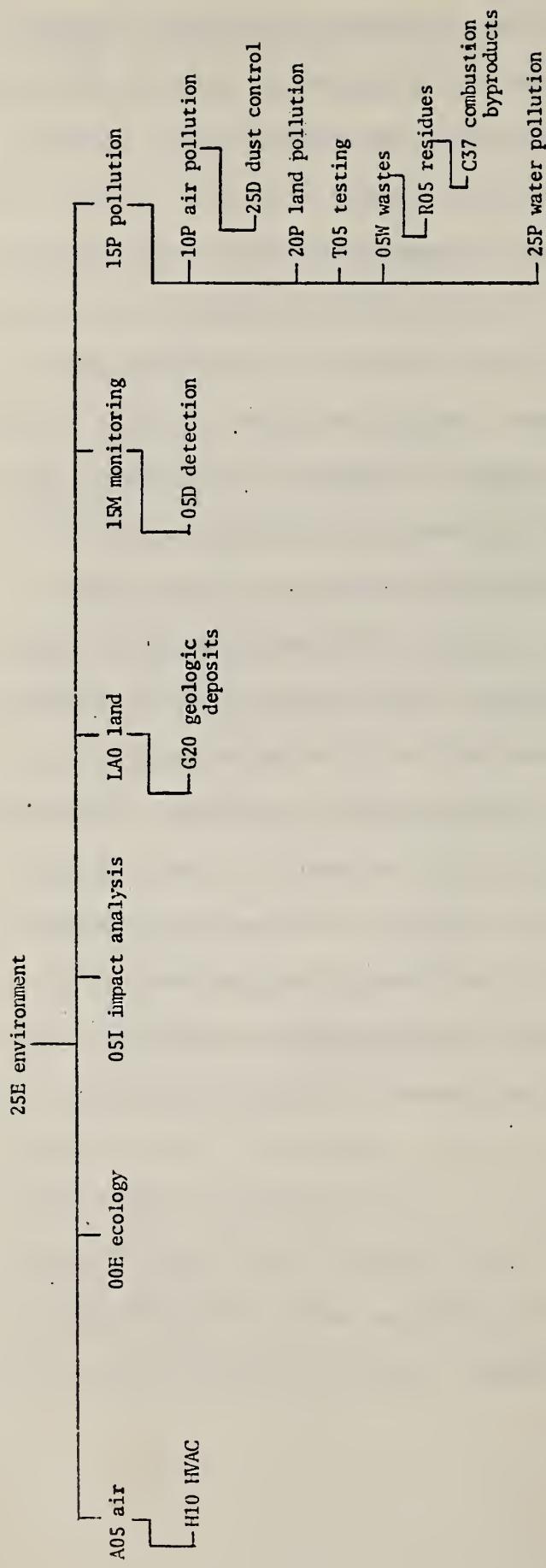
processes. Coal terms have a letter as the first character in their codes, and ES&H codes have a leading digit. For example, the first authority term in Part B is "10M abandoned mine." The code "10M" represents the term, or really the concept, "abandoned mines." Thus, 10M would be used in the indexing of a document that involved the concept of abandoned mines, whether or not those exact words appear in the document. The authority codes each contain at least one alphabetic and one numeric character; the middle character of the three may be either a letter or a number. Capital letter "0" is used in only one case, in the code for oxygen, for which the code is "capital 0, zero, zero." In all other cases "0" stands for zero.

Many authority term listings include UF and RT notations, each heading lists of one or more terms. UF stands for "Use For" and identifies a list of secondary, or "thesaurus" terms. Thesaurus terms are provided as a convenience to the searcher in order to convert a potentially large vocabulary of familiar terms into a comparatively compact set of authority terms used in indexing. Both authority and thesaurus terms may be added to the thesaurus as the need arises, and it is possible for a thesaurus term to be promoted to an authority term at some stage. There is a symmetry in the thesaurus in the sense that there is a USE (authority code and term) for each UF listing, and each UF list contains all the thesaurus terms assigned to the corresponding authority term. For example, the first thesaurus term in Part B is "abandoned shafts - USE 20P land pollution." This means that a document involving abandoned shafts would have 20P among its indexing codes. Therefore, if a user specified 20P as the sole search term, reference to this document (and many others) would be returned. However, if the document was a law that

applied only to West Virginia and the user simultaneously specified the code for Pennsylvania as the specific source, the reference for the West Virginia law would not be returned since the source specification was not met. The user could further refine the search by invoking the index for coal, which is C20, to concentrate on shafts of abandoned coal mines.

RT stands for Related Terms which are suggestions of other authority terms the searcher may wish to explore. Reciprocal RT references are provided. (If A is an RT for B, then B is an RT for A). In addition, the RT's are arranged in hierarchical patterns, one starting with "I20 coal industry" and the other with "25E environment." The main RT structures are given in Figure 1, omitting those authority terms at the finest level of detail in the structure. For example, "10M abandoned mines" is one of the narrower terms (NT's) under the broader term (BT) "20P land pollution," which is, in turn, a NT under "15P pollution," and "15P pollution" is an NT under "25E environment." Thus, "10M abandoned mines" could be discovered as a possible search term starting with any of the BT's: 25E, 15 or 20P. 10M would have been included in the tree if it had NT's of its own. BT's are noted in the thesaurus according to the structure in Figure 1. The trees provide one way, but far from the only way of relating the terms. The relationships in the trees have no significance beyond providing connected search paths. Several RT relationships between the two main trees in Figure 1 have been omitted for simplicity.

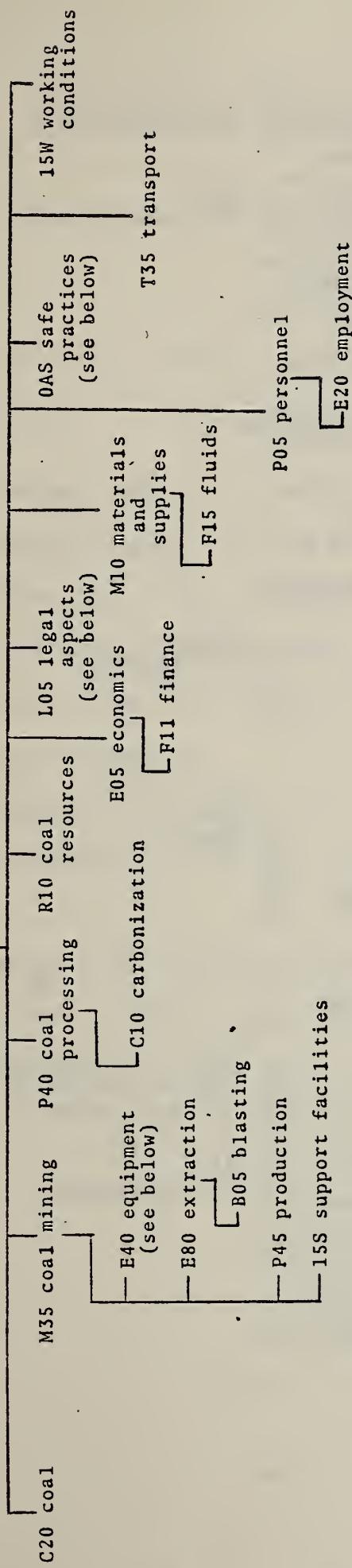
Figure 1. Authority Term Hierarchies* (Sheet 1 of 2)



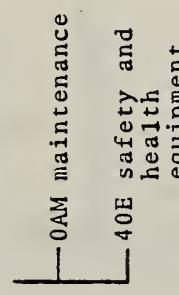
* A structure consisting of two hierarchies of related terms (RT's) is provided to help a user find alternate authority terms for searching. One hierarchy (or tree) begins with "25E environment" and the other with "120 coal industry". Each of the more than 200 authority terms belongs to one or the other of these trees. Figure 1 contains 58 terms, each of which has one or more RT's that expand on the particular term. A liberal number of RT's in the thesaurus were added to provide more direct connections within and between the trees.

Figure 1. Authority Term Hierarchies (Sheet 2 of 2)

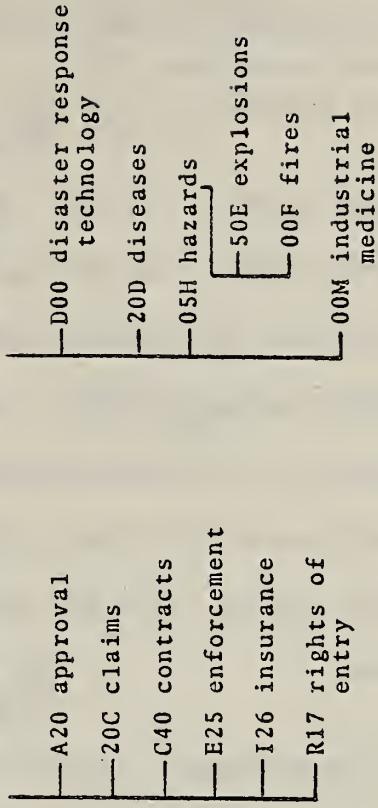
120 coal industry



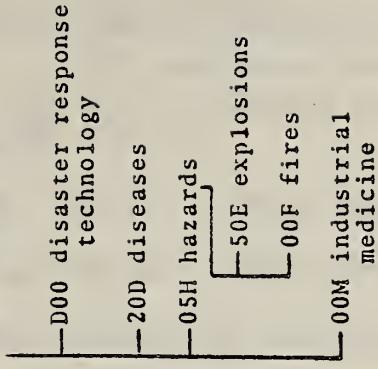
(E40 equipment)



(L05 legal aspects)



(OAS safe practices)



Thesaurus of Coal Technology and Environment, Safety and Health Terms

10M abandoned mines	UF mine abandonment	RT's BT 20P land pollution
abandoned shafts - USE 20P land pollution		
abandoned sites - USE 20P land pollution		
absenteeism - USE E20 employment		
acceptable concentrations - USE OAT threshold values		
accessories - USE E40 equipment		
accident prevention plans - USE OOP plans		
accident reports - USE 05R reports and records		
00A accidents	UF mine collapse	RT's BT 05H hazards
acid mine drainage - USE D05 drainage		
acid rain - USE 10W water general		
A00 aeration		RT's BT A05 air
aerial prospecting - USE E75 exploration		
aerial tramways - USE HAO haulage		
aerosol monitoring - USE 10P air pollution		
A01 aerosols		RT's TOP air pollution BT 25D dust control
05A aesthetics		RT's BT 25E environment
agglomeration - USE COO caking		

A05 air

<u>UF</u>	<u>RT's</u>
air flow	A00 aeration
air pressure	10P air pollution
air supply	G10 compressed gases
atmosphere	BT 25E environment
breathing air	H10 HVAC
breathing gas	
earth atmosphere	
respirable air	
surface air	

air circulation - USE V05 ventilation

A10 air curtains

<u>UF</u>	<u>RT's</u>
canopies	BT H10 HVAC

air cleaning - USE 10P air pollution

air cleaning systems - USE 10P air pollution

air contaminants - USE 11E emissions

air conditioning - USE H10 HVAC

air filters - USE F10 filters

air flow - USE A05 air

air heaters - USE H10 HVAC

A15 air infiltration

<u>UF</u>	<u>RT's</u>
air leakage	BT H10 HVAC
gas infiltration	

air leakage - USE A15 air infiltration

air monitors - USE 40E safety and health equipment

10P air pollution

<u>UF</u>	<u>RT's</u>
aerosol monitoring	A01 aerosols
air cleaning	A05 air
air cleaning systems	00C carbon dioxide
air pollution	05C carbon monoxide
abatement	25D dust control
air pollution control	G05 gaseous wastes
air pollution	11E emissions
monitors	BT 15P pollution
air quality	V00 vapors
air samplers	S60 sulfur
	OAN nitrous oxide

TOP air pollution (cont.)

UF	RT's
atmospheric chemistry	C37
clean air area	combustion
fallout	byproducts
flue gas	
fly ash	
smog	
smoke	
soot	
stack disposal	
sulfur removal	

air pollution abatement - USE 10A air pollution

air pollution control - USE 10P air pollution

air pollution monitors - USE 10P air pollution

air pressure - USE A05 air

air pump - USE H10 HVAC

air quality - USE 10P air pollution

air samplers - USE 10P air pollution

air supply - USE A05 air

alarm devices - USE 40E safety and health equipment

alarm systems - USE 40E safety and health equipment

alluvia - USE G20 geologic deposits

alluvial valley floors - USE G25 geologic structures

allocation - USE R15 resources

allowable concentrations - USE OAT allowable concentrations

alternating current - USE E10 alternating current

ANFO - USE E77 explosives

antifreeze - USE W10 working fluids

antitoxins - USE OOT toxins

anthracite coal - USE C20 coal

appeals - USE L05 legal aspects

application procedures - USE F05 federal assistance programs

application for approval - USE A20 approval

<u>UF</u>	<u>RT's</u>
application for	15C certification
approval	41E equipment
conditional approval	certification
disapproval	H00 hearing
extensions of	BT L05 legal aspects
approval	05L licenses
reapproval	P04 permits
variances	R25 rulings

approval list - USE 05R reports and records

arctic clothing allowance - USE 15H human factors design

20A asbestos

<u>RT's</u>
BT 25D dust control

25A ash

<u>UF</u>	<u>RT's</u>
bottom ash	10P air pollution
de-ash	BT C37 combustion by- products
	R05 residues

archeological sites - USE 005 protected sites

aquifers - USE 10W water

atmosphere - USE A05 air

atmospheric chemistry - USE 10P air pollution

atmospheric precipitations - USE W05 weather

auger mining - USE M40 surface mining coal

autopsies - USE 00D death

availability - USE S65 coal supply

backfilling - USE M40 surface coal mining and 00R reclamation

baghouse filters - USE F10 filters

backhoes - USE E50 surface mining equipment

T30 barge transport

RT's
BT T35 transport

belt conveyors - USE E55 underground mining equipment

bench testing - USE T05 testing

beneficiation - USE C30 coal preparation

benefit payments - USE 20I health insurance

benefits - USE 20I health insurance

bituminous coal - USE C20 coal

bias - USE 500 sampling

black coal - USE C20 coal

black lung - USE 05P pneumoconiosis

black lung benefits - USE 05P pneumoconiosis

B05 blasting

UF	RT's
blasting cables	E65 excavation
blasting caps	50E explosions
blasting devices	BT E80 extraction
boreholes	S52 stemming devices
cardox	E77 explosives
cartridges	N00 nitrogen
chemical explosions	compounds
detonation waves	
detonating card	
detonations	
detonators	
effectiveness tests	
explosive fracturing	
explosive wrappers	
ignition	
non-explosive wrappers	
propagation	
rate of detonation	
shock waves	
shot firer	
tamping	
underground explosions	
wrappers	
wrapper-to-explosive	
ratio	

blasting cables - USE B05 blasting
blasting caps - USE B05 blasting
blasting devices - USE B05 blasting
blueprints - USE P20 planning
boghead coal - USE C20 coal
boilers - USE B10 burners
boreholes - USE B05 blasting
boiler fuels - USE F25 solid and liquid fuels
boring machines - USE E55 underground mining equipment
brakes - USE E04 safety and health equipment
brand names - USE O0L labeling
breath - USE 15R respiration
breathing air - USE A05 air
breathing gas - USE A05 air
brown coal - USE C20 coal
bucket and wheel excavations - USE M40 surface coal mining
bulk shipping - USE T35 transport
Bureau of Mine districts - USE C35 coal producing districts
burns - USE 101 injury prevention and response
burner ignition - USE B10 burners

B10 burners	UF	RT's
	boilers	BT E40 equipment
	burner ignition	H05 heat
	combustion	M15 materials
	conversion	handling
	(oil to gas to coal)	P30 power plants
	de-ashing	
	draft control systems	
	ebullated bed	
	flames	
	flashback	

B10 burners cont.

UF
fluidized bed
fluidization
fuel-air ratio
fuel systems
furnaces
magnetohydrodynamic
(MHD) generators
MHD generators
oil burners
packed bed
stoichiometry
stokers

RT's

cables - USE 10E electrical systems

C00 caking

UF
agglomeration
compacting

BT P40 coal processing

calibration - USE E40 equipment

calorific values - USE H05 heat

cancer - USE 20D diseases

cannel coal - USE C20 coal

canopies - USE A10 air

capacitors - USE E35 electrical equipment

capacity - USE S36 specifications

C05 carbon compounds, mining
applications

UF
carborundum

BT M10 materials and
supplies

00C carbon dioxide

BT TOP air pollution

C10 carbonization

BT P40 coal processing
C36 coke

05C carbon monoxide

BT TOP air pollution

carborundum - USE C05 carbon compounds mining applications

cardox - USE B05 blasting

cardio-pulmonary respiratory training - USE 05T training

cartridges - USE B05 blasting

catalytic convertors - USE 35E pollution control equipment

cave-ins (controlled) - USE M45 underground coal mining

15C certification

UF RT's
uncertified person BT A20 approval
41E equipment
certification
P04 permits
P05 personnel

certified personnel - USE P05 personnel

chemical explosions - USE B05 blasting

chemical explosives - USE E77 explosives

C15 chemical reactions

RT's
BT P40 coal processing
P50 pyrolysis

charges - USE E77 explosives

child labor - USE E20 employment

checking - USE 15M monitoring

chemical treatment - USE M17 materials processing

cinders - USE C37 combustion byproducts

circulation (air) - USE V05 ventilation

circuit breakers - USE E35 electrical equipment

circuit protection - USE E35 electrical equipment

20C claims

RT's
15D disability
E11 eligibility
E25 enforcement
I26 insurance
L20 liability
BT L05 legal aspects
P05 personnel
20W workers
compensation

classification - USE OOL labeling

clean air area - USE 10P air pollution

clearance - USE 15H human factors design

clinkers - USE C37 combustion products

closure - USE OCS security

C20 coal

UF

anthracite coal
bituminous coal
black coal
boghead coal
brown coal
cannel coal
coal deposits
coal fines
coal seams
lignite
run-of-mine coal
sapropelic coal
sub-bituminous coal
torbanite

RT's

G00 coal derived gas
L40 coal derived
liquids
B00 coal derived
bituminous
materials
BT I20 coal industry
H15 hydrocarbons
F20 gas fuels
S25 slurries
F25 solid and liquid
fuels
C25 solvent-refined
coal
F30 synthetic fuels

coal cleaning - USE C30 coal preparation

coal deposits - USE C20 coal

B00 coal-derived bituminous
materials

UF

coal tar
creosote
feedstocks
naphtha
pitch
tar

RT's

BT C20 coal

G00 coal-derived gas

RT's

BT C20 coal

L40 coal-derived liquids

RT's

BT C20 coal

F25 solid and liquid
fuels

D09 coal dust

RT's

BT 25D dust control

P00 particles

coal fines - USE C20 coal

coal-fired MHD generators - USE B10 burners

coal gas - USE M25 methane

G15 coal gasification

UF
conversion
cracking
enrichment

BT RT's
P40 coal processing
I10 in-situ
processing

I20 coal industry
(no BT's)

RT's
C20 coal
M05 coal markets
M35 coal mining
P40 coal processing
R10 coal resources
M10 materials and
supplies
P05 personnel
OAS safe practices
T35 transport
E05 economics
L05 legal aspects
15W working
conditions

L30 coal liquefaction

UF
coal liquefaction
plants
conversion
cracking
enrichment
liquefaction

BT RT's
P40 coal processing

coal liquefaction plants - USE L30 coal liquefaction

coal-hauling vehicles - USE HAO haulage

M05 coal markets

UF
domestic markets
foreign markets

BT RT's
I20 coal industry
R10 coal resources
U00 electric
utilities
E76 exports
I05 imports
I15 industrial plants
P30 power plants

M35 coal mining

RT's
BT I20 coal industry
E40 equipment
E80 extraction
M10 materials and supplies
P45 production
15S support facilities
M40 surface coal mining
M45 underground coal mining

P10 coal pipelines

UF
sturry pipelines

RT's
BT T35 transport

C30 coal preparation

UF
beneficiation
coal cleaning
coal preparation
plants
crushing
drying
elutriation
flotation
pulverizing
screening
sizing
tramp metal removal
washing

RT's
BT P40 coal processing
E60 preparation equipment

coal preparation plants - USE C30 coal preparation

coal plows - USE E55 underground mining equipment

P40 coal processing

UF
desulfurization
devolatilization
forming
trace element
contamination

RT's
C00 caking
C10 carbonization
C15 chemical reactions
G15 coal gasification
BT I20 coal industry
L30 coal liquefaction
C30 coal preparation
I10 in-situ processing
P50 pyrolysis
S50 sintering
S35 solvent extraction

C35 coal producing district	<u>UF</u> Bureau of Mines districts	RT's BT <u>R10</u> coal resources
coal refuse - USE R05 residues		
R00 coal reserves		RT's BT <u>C10</u> coal resources
R10 coal resources		RT's BT <u>I20</u> coal industry M05 coal market C35 coal producing districts R00 coal reserves S65 coal supply 30C conservation E70 exploitation E75 exploration R15 resources
coal seams - USE C20 coal		
S55 coal storage	<u>UF</u> stockpiles stockpiling underground storage	RT's M21 materials storage BT T35 transport
S65 coal supply	<u>UF</u> availability	RT's BT <u>R10</u> coal resources
coal tar - USE B00 coal-derived bituminous materials		
coal users - USE 115 industrial plants		
coating - USE M17 material processing		
C36 coke	<u>UF</u> coke ovens coking coking plants formed coke	RT's BT <u>C10</u> carbonization C20 coal
coke ovens - USE C10 carbonization		
coking - USE C10 carbonization		
coking plants - USE C10 carbonization		
combustion - USE B10 burners		

C37 combustion byproducts UF RT's
cinders 20P air pollution
clinkers 25A ash
dust P30 power plants
furnace residue BT R05 residues
slag S20 sludges

combustion control - USE B10 burners

T00 combustion temperature control UF RT's
temperature BT P30 power plants
gradients
temperature measurement

combustion waves - USE B10 burners

combustors - USE B10 burners

combustibility - USE 15F flammability

comfort - USE 15H human factors design

E30 communications equipment UF RT's
in-mine BT E40 equipment
communication
pager 15S support
radio facilities
signaling devices
telephone devices

25C communities UF RT's
housing BT 00E ecology
schools 35P populations
social services

compacting - USE C00 caking

complaints - USE V06 violations

C38 compliance UF RT's
compliance BT E25 enforcement
schedules
exceptions
exemptions
extensions

compliance schedules - USE C38 compliance

compressed air - USE G10 compressed gases

compressed air gauges - USE G10 compressed gases

compressed air valves - USE G10 compressed gases

G10 compressed gases

<u>UF</u>	<u>RT's</u>
compressed air	BT A05 air
compressed air gauges	
compressed air valves	

concentrating tables - USE E60 preparation equipment

conditional approval - USE A20 approval

conditioning - USE M17 materials processing

28C conditions

<u>UF</u>	<u>RT's</u>
conditions at delivery	BT C40 contracts
conditions of manufacture	15W working conditions
conditions of operations	
conditions of purchase	
conditions of sale	
conditions of storage	
conditions of testing	
conditions of use	

conditions at delivery - USE 28C conditions

conditions of manufacture - USE 28C conditions

conditions of operation - USE 28C conditions

conditions of sale - USE 28C conditions

conditions of storage - USE 28C conditions

conditions of testing - USE 28C conditions

conditions of use - USE 28C conditions

conflict of interest - USE L05 legal aspects

confined spaces - USE 15W working conditions

30C conservation

<u>UF</u>	<u>RT's</u>
energy	BT R10 coal resources
conservation	R15 resources
resource conservation	

C39 construction

UF	<u>RT's</u>
floor opening	M35 coal mining
platforms	P20 planning
runways	BT P45 production
scaffolding	
stairways	
surface buildings	
timbers	

construction materials - USE M10 materials and supplies

consumables - USE M10 materials and supplies

contamination - USE 15P pollution

contouring - USE 00R reclamation

continuous miner - USE E55 underground mining equipment

C40 contracts

RT's	
28C	conditions
41E	equipment
	certification
L15	leasing
BT	L05 legal aspects
	S36 specifications

controlled atmosphere - USE A05 air

conversion (oil or gas to coal) - USE B10 burners

conveyors - USE M15 materials handling

cooling - USE H10 HVAC

cooling load - USE H10 HVAC

corrosion - USE E61 equipment degradation

core drilling - USE E75 exploration

C45 cost-benefit analysis

<u>RT's</u>	
BT	E05 economics

costs - USE F11 finance

CPR training - USE 05T training

creosote - USE B00 coal-derived bituminous materials

critical habitat - USE 00H habitat

crushing - USE C30 coal preparation

crushers - USE E60 preparation equipment

cultivation - USE 20P revegetation

current - USE E10 electricity

cutoff valves - USE 42E safety feature on equipment

cyclones - USE E40 equipment

cyclonic mechanical dust collectors - USE E40 equipment

danger zone - USE 05H hazards

dangerous condition - USE 05H hazards

dating - USE 00L labeling

de-ash - USE 25A ash

de-ashing - USE B10 burners

UF
autopsies

RT's
BT D00 disaster response
technology

defects - USE 0AF equipment failures

description - USE S36 specification

design - USE S36 specification

desulfurization - USE P40 processing

descaling - USE 35E pollution control equipment

05D detection

RT's
OAS safe practices
15I inspections
25I investigations
BT 15M monitoring
T05 testing

deterioration - USE E61 equipment degradation

detonating cord - USE B05 blasting

detonations - USE B05 blasting

detonation waves - USE B05 blasting

detonators - USE B05 blasting

10D diagnosis

RT's
BT 20D diseases
00M industrial
medicine

diesel engines - USE 05H hazards

15D disability

RT's
BT 20C claims
15D diseases
10I injuries

disallowal - USE 41E equipment certification

disapproval - USE A20 approval

DOO disaster response
technology

RT's
00D death
21D disinfection
12E emergencies
00M industrial
medicine
10R rescue operations
BT 0AS safe practices
05T training
15W working
conditions

disaster response plans - USE 00P plans

20D diseases

UF
cancer
emphysema
etiology
illness
occupational
disease
pathogenesis
pathogens
respiratory system
symptoms

RT's
30C claims
10D diagnosis
15D disability
55E exposure limits
00M industrial
medicine
10I injuries
05P pneumoconiosis
BT 0AS safe practices
0AT threshold values

21D disinfection

RT's
BT 000 disaster response
technology

disturbed lands - USE LA0 land

direct current - USE E10 electricity

domestic markets - USE M05 coal markets

draft control systems - USE B10 burners

draglines - USE E50 surface mining equipment

D05 drainage

UF acid mine drainage BT 25P water pollution
mine drainage

drainage basin - USE 10W water

drawdown - USE 10W water

drawings - USE S30 specification

dressing - USE M17 materials processing

drilling - USE E80 extraction

drinking water - USE 10W water

dryers - USE E60 preparation equipment

drying - USE C30 coal preparation

dust - USE C37 combustion byproducts

dust collectors - USE E40 equipment

dust control - USE D09 coal dust

25D dust control

UF dust control foam RT's A01 aerosols
dusty mine BT 10P air pollution
atmospheres 20A asbestos
D09 coal dust
P00 particles
05P pneumoconiosis
D10 surface dust

dust control foam - USE D09 coal dust

dust, mist and fume respirators - USE 40E safety and health equipment

dust samplers - USE 40E safety and health equipment

dynamite - USE E77 explosives

earth atmosphere - USE A05 air

E00 earthquakes

UF
seismic events
tremors

RT's
BT LAO land

ease of use - USE 15H human factors design

ebullated bed - USE B10 burners

ecological disruption - USE 00E ecology

00E ecology

UF
ecological
disruption
ecosystems
food chain
ground cover

RT's
25C communities
05S endangered and
threatened species
BT 25E environment
10F fish and wildlife
00H habitat
35P populations

economic impact - USE 00I impact

E05 economics

UF
payback period
risk assessment
small business

RT's
C45 cost-benefit
analysis
F11 finance
S70 supply and demand
BT I20 coal industry
E70 exploitation

ecosystems - USE 00E ecology

education - USE 05T training

effectiveness tests - USE A05 blasting

05E effluents

RT's
BT 25P water pollution

elapsed time indicators - USE 40E safety and health equipment

electric discharges - USE E10 electricity

electric faults - USE E10 electricity

electric power - USE E10 electricity

U00 electric utilities

UF
private utilities
public utilities

RT's
M05 coal markets
E10 electricity
BT P30 power plants

electric shock - USE 101 injury prevention and response

E35 electrical equipment

<u>UF</u>	<u>RT's</u>
batteries	BT E40 equipment
battery boxes	E10 electricity
cable reels	
capacitors	
circuit breakers	
circuit protection	
fuses	
trailing cables	
trolley feeder wires	

10E electrical systems

<u>UF</u>	<u>RT's</u>
cables	E10 electricity
dead-man control	BT E40 equipment
switches	
deenergizing	
diodes	
electrical tests	
filaments	
fuses	
fuse boxes	
grounding	
insulation	
power circuit	
resistors	
signal circuit	
switches	
wiring	

electrical tests - USE 10E electrical systems

E10 electricity

<u>UF</u>	<u>RT's</u>
alternating current	E35 electrical
current	equipment
direct current	10E electrical
electric discharges	systems
electric faults	U00 electrical
electric power	utilities
external arcs	E40 equipment
polarity	L25 lighting systems
voltage	P30 power plants
	P35 power
	transmission
	BT 15S support
	facilities

electrostatic precipitators - USE 35E pollution control equipment

electrostatic precipitations - USE 35E pollution control equipment

E11 eligibility

BT RT's
20C claims

elutriation - USE C30 coal preparation

E15 embankments

BT RT's
05H hazards

12E emergencies

UF
emergency shelter BT RT's
 D00 disaster response
 technology

emergency - USE 10H health services

emergency medical services - USE 10H health services

emergency procedure instructions - USE 00L labeling

emergency shelter - USE 12E emergencies

eminent domain - USE S75 surface rights

11E emissions

UF
air contaminants BT RT's
 10P air pollution
 05H hazards

emphysema - USE 20D diseases

15E employee responsibilities

BT RT's
 E20 employment

20E employer responsibilities

BT RT's
 E20 employment

employee transfer - USE 01R personnel rehabilitation

E20 employment

UF
absenteeism 15E employee
child labor responsibilities
grievance procedures 20E employer
labor practices responsibilities
labor representation OAP human physical
length of services requirements
retirement L05 legal aspects
termination BT P05 personnel
 01R personnel
 rehabilitation
 20W workers
 compensation

enclosed areas - USE 15W working conditions

enclosures - USE 42E safety features on equipment

05S endangered and threatened
species

RT's
BT 00E ecology
10F fish and wildlife

energy absorption factor - USE S36 specifications

energy conservation - USE 30C conservation

energy resources - USE R15 resources

energy supply - USE 30C conservation

enforcement - USE C38 compliance

E25 enforcement

RT's
20C claims
C38 compliance
15I inspections
25I investigations
BT L05 legal aspects
PA0 payments and fees
P01 penalties
05R reports and
records
V06 violations

25E environment
(no BT's)

UF
environmental effects RT's
environmental 05A aesthetics
engineering A05 air
environmental 00E ecology
exposure pathway 30E environmental
environmental impact statements
materials 05I impact analysis
environmental LA0 land
policy 15M monitoring
environmental 15P pollution
transport 08S seasonal
 restrictions
 10W water
 W05 weather

environmental effects - USE 25E environment

environmental engineering - USE 25E environment

environmental exposure pathway - USE 25E environment

30E environmental impact
statementRT's
25E environment
BT 05I impact analysis

environmental materials - USE 25E environment

environmental policy - USE 25E environment

environmental transport - USE 25E environment

E40 Equipment	<u>UF</u> accessories calibration cyclones cyclonic mechanical dust collectors dust collectors indicators instrumentation jet drills pressure regulators	RT's B10 burners BT M35 coal mining E30 communications equipment E10 electricity E35 electrical equipment 10E electrical systems H10 HVAC I24 installation of equipment E45 laboratory equipment OAM maintenance 35E pollution control equipment E60 preparation equipment E50 surface mining equipment E55 underground mining equipment 40E safety and health equipment
41E equipment certification	<u>UF</u> disallowal equipment inspection modifications	RT's BT A20 approval 05L licenses P04 permits
E61 equipment degradation	<u>UF</u> corrosion deterioration leakage	RT's 0AF equipment failure BT OAM maintenance T15 thermal degradation

OAF equipment failure	UF defects misfires test failure	RT's E61 equipment degradation 05H hazards BT OAM maintenance
equipment inspection - USE 41E equipment certification		
equipment location - USE 124 installation of equipment		
equipment recall - USE 0AR recall		
45E erosion		RT's BT 20P land pollution
escapeways - USE M45 underground coal mining		
etiology - USE 20D diseases		
evacuation plans - USE 00P plans		
E65 excavation		RT's BT 05 blasting E80 extraction
exceptions - USE C38 compliance		
exemptions - USE C38 compliance		
exhalation - USE 15R respiration		
exhaust gases of diesel vehicles - USE 05H hazards		
expenses - USE F11 finance		
experience - USE P05 personnel		
E70 exploitation		RT's BT C10 coal resources E05 economics E75 exploration P45 production
E75 exploration	UF aerial prospecting core drilling geological surveys prospecting radiometric surveys remote sensing surveys	RT's BT C10 coal resources C70 exploitation P45 production
explosion proof - USE 50E explosions		

50E explosions	UF explosive hazards explosion proof explosion-proof enclosure non-explosion proof	RT's B05 blasting BT 05H hazards M25 methane OBP permissibility
E77 explosives	UF ANFO (ammonium nitral fuel oil mixture) charges chemical explosives dynamite explosives storage gelatinous explosives nitroglycerine non-gelatinous explosives plastique propellant TNT	RT's B05 blasting M10 materials and supplies N00 nitrogen compounds S52 stemming devices M21 materials storage
	explosive proof - USE 50E explosions	
	explosive fracturing - USE A05 blasting	
	explosive hazards - USE 50E explosions	
	explosive wrapper - USE A05 blasting	
E76 exports		RT's BT M05 coal markets
55E exposure limits		RT's BT 20D diseases OAT threshold values
	expression of results - USE 05R reports and records	
	extensions - USE C38 compliance	
	extensions of approval - USE A20 approval	
E80 extraction	UF drilling mines mining engineering	RT's 25D dust control B05 blasting E65 excavation HA0 haulage (in-mine) M15 materials handling OOW waste management BT M35 coal mining

extraction apparatuses - USE E45 laboratory equipment

extraction columns - USE E45 laboratory equipment

fabric filters - USE F10 filters

face masks - USE 40P protective clothing

fallout - USE 10P air pollution

fallout deposits - USE 10P air pollution

fauna - USE 35P populations

F05 federal assistance
programs

UF application
procedures
funding
grants
research grants

RT's
BT F11 finance

F00 federal test procedures

RT's
BT T05 testing

feedstocks - USE B00 coal-derived bituminous materials

feedwater - USE W00 water

fees - USE F11 finance

fee schedules - USE F11 finance

fencing - USE 20P land pollution

fertilization - USE 20R revegetation

field testing - USE T05 testing

F10 filters

UF air filters
baghouse filters
fabric filters

RT's
BT 15P pollution
40P protective
clothing

F11 finance

UF costs
expenses

RT's
BT E05 economics
F05 federal
assistance programs
L45 loans
PAO payments and fees

fire control foam - USE 00F fires

fire control projects - USE 00F fires

firedamp - USE M25 methane

fire detection - USE 00F fires

fire extinguishers - USE 00F fires

fire fighting - USE 00F fires

fire fighting equipment - USE 00F fires

fire hazards - USE 00F fires

fire prevention - USE 00F fires

fire resistance - USE 00F fires

fire safety - USE 00F fires

00F fires

UF

RT's

fire control foam

15F flammability

fire control

BT 05H hazards

projects

V10 volatility

fire detection

fire extinguisher

fire fighting

fire fighting equipment

fire hazards

fire prevention

fire resistance

fire safety

spontaneous combustion

05F first aid

UF

RT's

first-aid kit

BT 00M industrial

triage

medicine

10I injuries

first aid training - USE 05T training

10F fish and wildlife

UF

RT's

wildlife

BT 00E ecology

05S endangered and
threatened species

35P populations

flame arresting path - USE 15F flammability

flame detectors - USE 40E safety and health equipment

flame resistance - USE 15F flammability

flame safety lamps - USE 40E safety and health equipment

flames - USE B10 burners

15F flammability

<u>UF</u>	<u>RT's</u>
after burning	BT <u>00F</u> fires
combustibility	V10 volatility
flame-arresting path	
flame resistance	
inflammability	
non-combustibility	
non-flammability	

flashback - USE B10 burners

flotation - USE C30 coal preparation

floods - USE 10W water

floor openings - USE C39 construction

flora - USE 35P populations

flue gas - USE 10P air pollution

fluidized bed - USE B10 burners

fluidized bed combustion - USE B10 burners

fluidized bed reactors - USE B10 burners

fluidization - USE B10 burners

F15 fluids

<u>RT's</u>
L35 liquids
BT M10 materials and supplies
W10 working fluids

fly ash - USE 25A ash

food chain - USE 00E ecology

formed coke - USE C10 carbonization

forming - USE P40 processing

fossil fuel power plants - USE P30 power plants

fossil fuels - USE F25 solid and liquid fuels

fuel feeding systems - USE B10 burners

fuel gas - USE F25 solid and liquid fuels

fuel-air ratio - USE B10 burners

fuel systems - USE B10 burners

fuel slurries - USE F25 solid and liquid fuels

fume hoods - USE E45 laboratory equipment

fumes - USE V00 vapors

funding - USE F05 federal assistance programs

funds - USE F11 finance

furnace residue - USE C37 combustion byproducts

furnaces - USE B10 burners

fuses - USE E35 electrical equipment

galvanizing - USE M17 materials processing

gaseous waste - USE 05W wastes

G05 gaseous wastes

RT's
BT TOP air pollution

F20 gas fuels

UF
gas generators
gas yields
methane
natural gas

RT's
BT C20 coal
H15 hydrocarbons
F25 solid and liquid
fuels

gas generators - USE F20 gas fuels

gas infiltration - USE A15 air infiltration

gas masks - USE 40E safety and health equipment

gas yields - USE F20 gas fuels

gassy mines - USE M25 methane

gating - USE OCS security

gelatinous explosives - USE E77 explosives

G20 geologic deposits	<u>UF</u> alluvia sediments	<u>RT's</u> G20 geological structures
		BT LAO land S30 soils

G25 geological structures	<u>UF</u> alluvial valley floors strata	<u>RT's</u> G20 geological deposits
		BT LAO land R20 rocks

geological surveys - USE E75 exploration

government employees - USE P05 personnel

grading - USE O0R reclamation

grants - USE F05 federal assistance programs

grazing - USE 20R revegetation

ground cover - USE O0E ecology

ground disposal - USE 20P land pollution

ground water - USE 10W water

grounding - USE 10E electrical systems

guards - USE 42E safety features on equipment

OOH habitat	<u>UF</u> critical habitat protected habitat	<u>RT's</u> BT O0E ecology
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hail - USE W05 weather

handling - USE HAO haulage, in mine

haulage - USE M40 surface coal mining

HAO haulage	<u>UF</u> aerial tramways coal-hauling vehicle handling	<u>RT's</u> M15 materials handling BT T35 transport
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05H hazards

<u>UF</u>	<u>RT's</u>
danger zone	0BP permissibility
dangerous condition	E15 embankments
diesel engines	11E emissions
exhaust gases of diesel engines	0AF equipment failure 50E explosions
hazardous atmosphere	00F fires
incendiary materials	30I irritants
poisonous gases	00N noise levels
rubbish	BT OAS safe practices
sparks	00T toxins
zone of danger	15P pollution 00A accidents 15W working conditions

hazardous atmosphere - USE 05H hazards

head clearance - USE 15H human factors design

health impact - USE 00I impact

20I health insurance

<u>UF</u>	<u>RT's</u>
benefits	BT I26 insurance
benefit payments	I25 liability
survivors	insurance

health plans - USE 00P plans

10H health services

<u>UF</u>	<u>RT's</u>
emergency medical services	BT 00M industrial medicine
physical examination	
preventive medicine	

H00 hearings

<u>UF</u>	<u>RT's</u>
notice	BT A20 approval L05 legal aspects

H05 heat

<u>UF</u>	<u>RT's</u>
calorific values	T10 thermal conductivity
heat exchangers	T15 thermal degradation
heat transfer	T20 thermal fatigue
heat transfer fluids	T25 thermodynamic properties
heating	0AM maintenance
heat load	BT P30 power plants
kilns	S50 steam
operating temperature	25P water pollution
radiators	B10 burners
surface temperature	
waste heat	

heat exchangers - USE H05 heat

heat load - USE H05 heat

heat transfer - USE H05 heat

heat transfer - USE H05 heat

heat treatment - USE M17 materials handling

heating - USE H05 heat

heating, ventilating, and air conditioning. See HVAC.

height - USE OAP human physical requirements

helmets - USE 40P protective clothing

high wall reduction - USE OOR reclamation

hoisting - USE M15 materials handling

hopper cars - USE T40 rail transport

hoppers - USE M15 materials handling

hot work - USE 15W working conditions

housing - USE 25C communities

human - USE 35P populations

15H human factors design	UF arctic clothing allowance comfort clearance ease of use head clearance legibility operating space envelope placement seat index point visibility weight of apparatus	RT's OAP human physical requirements BT 15W working conditions
OAP human physical requirements	UF height visual acuity	RT's BT E20 employment 15H human factors design

H10 HVAC (heating, ventilation and air conditioning)	UF air conditioning air heaters	RT's A10 air curtains A15 air infiltration BT E40 equipment 000 oxygen 15R respiration V05 ventilation A05 air
hydraulic fluids - USE W10 working fluids		
hydraulic mining - USE M45 underground coal mining		
H15 hydrocarbons		RT's BT C20 coal
hydrology - USE 10W water		F25 solid and liquid fuels
identification - USE 00L labeling		
ignition - USE B05 blasting		
illness - USE 20D diseases		
illumination - USE L25 lighting systems		
00I impact	UF economic impact environmental impact health impact medical impact social impact	RT's BT 05I impact analysis
05I impact analysis		RT's BT 25E environment 30E environmental impact statement 00I impact 15P pollution
impact ripping machines - USE E55 underground mining equipment		
I00 impact shock	UF impact strength impact tests	RT's BT T05 testing
impact strength - USE I00 impact shock		
impact tests - USE I00 impact shock		

I05 imports

BT RT's
M05 coal markets

impregnation - USE M17 materials processing

impounding reservoirs - USE 25P water pollution

incendiary materials - USE 05H hazards

inclined screen jigs - USE E60 preparation of equipment

indicators - USE E40 equipment

industrial accidents - USE 00A accidents

00M industrial medicine

UF
medical centers

BT RT's
10D diagnosis
D00 disaster response
technology
05F first aid
10H health services
45P public health
OAS safe practices
20D diseases
10I injuries

I15 industrial plants

UF
coal users

BT RT's
M05 coal markets

industrial wastes - USE 05W wastes

inflammability - USE 15F flammability

inhalation - USE 15R respiration

injunction - USE L05 legal aspects

10I injuries

UF
burns
electric shock
wounds

BT RT's
15D disability
20D diseases
05F first aid
O0M industrial
medicine

in-mine communications - USE E30 communications equipment

in-mine gas - USE M25 methane

in-situ combustion - USE I10 in-situ processing

in-situ gasification - USE I10 in-situ processing

I10 in-situ processing

UF RT's
in-situ combustion BT P40 coal processing
in-situ gasification G15 coal gasification
L30 coal liquefaction

I5I inspections

RT's
BT 05D detection
E25 enforcement
18I inspectors
25I investigations

inspector experience - USE 18I inspectors

inspector qualifications - USE 18I inspectors

18I inspectors

UF RT's
inspector experience 15I inspections
inspector BT P05 personnel
qualification

I24 installation of equipment

UF RT's
equipment location BT E40 equipment
equipment run-in
mounting
safe locations

instructions - USE 00L labeling

instrumentation - USE E40 equipment

instrument-controlled machines - USE E55 underground mining equipment

insulation - USE 10E electrical systems

I26 insurance

RT's
20C claims
20I health insurance
BT L05 legal aspects
L20 liability
L25 liability
insurance
20W workers'
compensation

interchangeability - USE F25 solid and liquid fuels

interlocks - USE 40E safety and health equipment

intrinsic safety - USE 42E safety features on equipment

inventories - USE M10 materials support

25I investigations

RT's
05D detection
BT E25 enforcement
15I inspections

irrigation - USE 10W water

30I irritants

RT's
BT 05H hazards
00T toxins

jet drills - USE E40 equipment

kilns - USE H05 heat

00L labeling

<u>UF</u>	<u>RT's</u>
brand names	BT safety and health
certification number	equipment
classification	42E safety features
dating	on equipment
emergency procedure	15W working
instructions	conditions
lot numbers	
markings	
MHSA approval label	
operating instructions	
operating rules	
symbols	
warning labels	

labor practices - USE E20 employment

labor representation - USE E20 employment

E45 laboratory equipment

<u>UF</u>	<u>RT's</u>
extraction columns	E40 equipment
extraction	T05 testing
apparatuses	BT 15S support
fume loads	facilities
mist extractors	
samplers	

lamps - USE E55 underground mining equipment

LAO land

UF
disturbed lands
land acquisition
orphaned lands

RT's
E00 earthquakes
BT 25E environment
G20 geological
deposits
G25 geological
structures
20P land pollution
L00 land use
L05 legal aspects
S15 mine siting
S10 power plant
siting
R20 rocks
S30 soils

land acquisition - USE LAO land

land entries - USE S75 surface rights

20P land pollution

UF
abandoned shafts
abandoned sites
fencing
ground disposal
land pollution
abatement
landscaping
landslides
mineral wastes
slope stability
spoil banks
tipple
weathering

RT's
T0M abandoned mines
45E erosion
LAO land
BT 15P pollution
00S protected sites
00R reclamation
20R revegetation

land pollution abatement - USE 20P land pollution

L00 land use

RT's
BT LAO land

landscaping - USE 20P land pollution

landslides - USE 20P land pollution

lawsuits - USE L05 legal aspects

L10 leaching

RT's
BT 25P water pollution

leakage - USE E61 equipment degradation

leaks - USE RAO repairs

leases - USE L15 leasing

L15 leasing	<u>UF</u> leases	RT's BT C40 contracts
L05 legal aspects	UF appeals conflict of interest injunctions lawsuits witnesses	RT's A20 approval 20C claims BT I20 coal industry C40 contracts E20 employment E25 enforcement H00 hearings I26 insurance LA0 land R17 rights of entry

legibility - USE 15H human factors design

length of service - USE E20 employment

letters - USE 05R reports and records

L20 liability		RT's BT I26 insurance
I25 liability insurance		RT's BT I26 insurance 20I health insurance
05L licenses		RT's BT A20 approval 41E equipment certification P04 permits

life support systems - USE 40E safety and health equipment

L25 lighting systems	<u>UF</u> candlepower illumination	RT's BT E10 electricity 15W working conditions
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lightning - USE W05 weather

lightning rods - USE 40E safety and health equipment

lignite - USE C20 coal

limiters - USE 42E safety features on equipment

limits - USE S36 specifications

limits of error - USE S36 specifications

liquefaction - USE L30 coal liquefaction

liquid fuels - USE F25 solid and liquid fuels

liquid wastes - USE O5W wastes

L35 liquids

RT's
BT F15 fluids

livestock - USE 35P populations

load - USE S36 specifications

L45 loans

RT's
BT F11 finance

locked storage - USE OCS security

locking - USE OCS security

locking devices - USE 42E safety features on equipment

locks - USE OCS security

locomotives - USE T40 rail transport

longwall - USE M45 underground coal mining

longwall conveyors - USE E55 underground mining equipment

lot numbers - USE OOL labeling

lubrication - USE OAM maintenance

magazines - USE M21 materials storage

magnets hydrodynamic (MHD) generators - USE B10 burners

magnets - USE E60 preparation equipment

<u>UF</u>	<u>RT's</u>
Tubrication	BT E40 equipment E61 equipment degradation OAF equipment failure MOO maintenance procedures OAR recall RAO repairs H05 heat

maintenance interval - USE MOO maintenance procedures

<u>UF</u>	<u>RT's</u>
maintenance interval preventive scheduled maintenance time in service	BT OAM maintenance M17 materials processing

manlifts - USE E55 underground mining equipment

manpower - USE P05 personnel

man testing - USE T05 testing

markings - USE O0L labeling

<u>UF</u>	<u>RT's</u>
construction materials consumables delivery inventories materials for components parts stores supplies	BT C05 carbon compounds (mining applications) M35 coal mining I20 coal industry C39 construction E77 explosives F15 fluids M15 materials handling M17 materials processing M20 materials recovery M21 materials storage P15 pipes

materials for components - USE M10 materials and supplies

M15 materials handling	<u>UF</u> conveyors hoisting hoppers packaging rough handling shipment of materials	<u>RT's</u> HAO haulage M10 materials and supplies BT T35 transport
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M17 materials processing	<u>UF</u> chemical treatment coating conditioning dressing galvanizing heat treatment impregnation pressure treatment rust proofing steaming vulcanization waterproofing	<u>RT's</u> M00 maintenance procedures BT M10 materials and supplies
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materials recall - USE OAR recall

M20 materials recovery	<u>UF</u> recycling	<u>RT's</u> BT M10 materials and supplies
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M21 materials storage	<u>UF</u> magazines shelf life	<u>RT's</u> S55 coal storage E77 explosives BT M10 materials and supplies OCS security 15W working conditions
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materials testing - USE T05 testing

maximums - USE S36 specifications

medical centers - USE OOM industrial medicine

medical impact - USE OOI impact

methane - USE F20 gas fuels

M25 methane	<u>UF</u> coal gas firedamp gassy mines in-mine gas	<u>RT's</u> BT 50E explosions
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methane detectors - USE 40E safety and health equipment

MHD generators - USE B10 burners

MHSA approval label - USE 00L labeling

milss - USE E60 preparation equipment

mine abandonment - USE 10M abandoned mines

mine collapse - USE 00A accidents

mine drainage - USE D05 drainage

mine maps - USE 05R reports and records

mine-month generating plants - USE P30 power plants

05M mine permit areas

RT's
BT R17 rights of entry

mineral fuels - USE F25 solid and liquid fuels

mineral resources - USE R15 resources

M30 mineral rights

RT's
BT R17 rights of entry

mineral wastes - USE 20P land pollution

mine rehabilitation - USE 00R reclamation

mine rescue - USE 10R rescue operations

mine roadways - USE M40 surface coal mining

S15 mine siting

RT's
BT LA0 land

miners - USE P05 personnel

mines - USE E80 extraction

minimums - USE S36 specifications

mining engineering - USE E80 extraction

misfires - USE 0AF equipment failure

mist extractors - USE E45 laboratory equipment

modifications - USE 41E equipment certifications

15M monitoring

UF
checking

RT's

05D detection

BT 25E environment

Q00 quality control

S00 sampling

T05 testing

mountaintop removal - USE M40 surface coal mining

mounting - USE I24 installation certifications

naphtha - USE B00 coal-derived bituminous materials

natural gas - USE F20 gas fuels

N00 nitrogen compounds

RT's

BT B05 blasting
E77 explosives

nitroglycerine - USE E77 explosives

OAN nitrous oxide

RT's

BT 10P air pollution

noise exposure - USE O0N noise levels

O0N noise levels

UF

noise exposure

RT's

BT 05H hazards

noise pollution

15P pollution

noise-sensitive areas

noise pollution - USE O0N noise levels

noise-sensitive areas - USE O0N noise levels

non-combustibility - USE 15F flammability

non-explosion proof - USE 50E explosions

non-explosive wrapper - USE B05 blasting

non-flammability - USE 15F flammability

non-gelatinous explosives - USE E77 explosives

notice - USE H00 hearings

notification - USE 05R reports and records
occupational disease - USE 20D diseases
oil burners - USE B10 burners
operating instructions - USE 00L labeling
operating rules - USE 00L labeling
operating space envelope - USE 15H human factors design
operating temperature - USE H05 heat
operational procedures - USE 0AS safe practices
operators - USE P05 personnel
operator protection - USE 42E safety features on equipment
operator qualification - USE 05T training
operator training - USE 05T training
organic sulfur - USE S50 sulfur
organic wastes - USE 05W wastes
orphaned lands - USE LA0 land
overburden - USE M40 surface coal mining

000 oxygen

RT's
BT H10 HVAC

packaging - USE M15 materials handling
packed bed - USE B10 burners
pager - USE E30 communications equipment
paleontology - USE 00S protected sites
particle size - USE P00 particles
particle suspension - USE P00 particles

P00 particles

UF
particle size
particle
suspension
particulate matter

RT's
D09 coal dust
BT 25D dust control

particulate matter - USE P00 particles

parts - USE M10 materials and supplies

pathogenesis - USE 20D diseases

pathogens - USE 20D diseases

pathology - USE 20D diseases

payback period - USE E05 economics

PAO payments and fees

RT's

E25 enforcement

BT F11 finance

P04 permits

05L licenses

P01 penalties

UF

sanctions

RT's

E25 enforcement

V06 violations

performance criteria - USE S36 specifications

OBP permissibility

UF

permissible

RT's

50E explosions

 equipment BT 40E safety and health

permissible materials

 equipment

permissible personal

 gear

permissible supplies

permissible equipment - USE OBP permissibility

permissible materials - USE OBP permissibility

permissible personal gear - USE OBP permissibility

permissible supplies - USE OBP permissibility

P04 permits

UF

posting

RT's

A20 approval

revocation

05L licenses

41E equipment

 certification

15C certification

P05 personnel	UF	RT's
	certified personnel	T5C certification
	experience	20C claims
	government employees	BT I20 coal industry
	manpower	E20 employment
	miners	18I inspectors
	operators	05T training
	professional personnel	15W working conditions
	qualifications	
	qualified operators	
	test subjects	
	uncertified personnel	

personnel examination - USE T05 testing

OLR personnel rehabilitation UF RT's
employee transfer BT E20 employment
vocational
rehabilitation

physical examination - USE 10H health services

P15 pipes
BT $\frac{RT's}{M10}$ materials and supplies

pipeline corridor - USE S75 surface rights

pitch - USE BOO coal-derived bituminous materials

placement - USE 15H human factors design

planting - USE 20R revegetation

plastique - USE E77 explosives

platforms - USE C39 construction

plats - USE 05R reports and records

05P pneumoconiosis	UF black lung black lung benefits	RT's 20D diseases 25D dust control
poisonous gases - USE 05H hazards		
polarity - USE E10 electricity		
15P pollution	UF contamination pollution abatement pollution control prevention of significant deterioration purification stationary pollutant sources washout	RT's 10P air pollution 25E environment F10 filters 20P land pollution 00N noise levels 30P pollution control agencies 35E pollution control equipment 25P water pollution 05W wastes 05I impact analysis T05 testing
pollution abatement - USE 15P pollution		
pollution control - USE 15P pollution		
30P pollution control agencies		RT's BT 15P pollution
35E pollution control equipment	UF catalytic convertors descaling dust collectors electrostatic precipitation electrostatic precipitators scrubbers scrubbing	RT's BT E40 equipment 15P pollution 15S support facilities
35P populations	UF fauna flora human livestock vegetative cover	RT's 25C communities BT 00E ecology 10F fish and wildlife
posting - USE P04 permits		
power circuit - USE 10E electrical systems		

P30 power plants	<u>UF</u> fossil fuel power plants mine-mouth generating plants	<u>RT's</u> B10 burners C37 combustion byproducts T00 combustion temperature control
		BT M05 coal markets E10 electricity S40 stacks S10 power plant siting P35 power transmission H05 heat U00 electric utilities
S10 power plant siting		<u>RT's</u> BT LA0 land P30 power plants
P35 power transmission		<u>RT's</u> BT E10 electricity P30 power plants
E60 preparation equipment	<u>UF</u> concentrating tables crushers dryers inclined screen jigs magnets mills pulverizers	<u>RT's</u> C30 coal preparation BT E40 equipment
pressure flushing - USE M45 underground coal mining		
pressure regulators - USE E40 equipment		
pressure testing - USE T05 testing		
pressure treatment - USE M17 materials processing		
prevention of significant deterioration - USE 15P pollution		
preventive maintenance - USE M00 maintenance procedures		
preventive medicine - USE 10H health services		
private utilities - USE U00 electrical utilities		

P45 production

UF
production
statistics

RT's
BT M35 coal mining
E80 extraction
E70 exploitation
E75 exploration
C39 construction
P20 planning

production plans - USE P20 planning

production statistics - USE P45 production

professional personnel - USE P05 personnel

proof load - USE T05 testing

propagation - USE B05 blasting

propellant - USE E77 explosives

property seizure - USE S75 surface rights

prospecting - USE E75 exploration

protected habitat - USE OOH habitat

00S protected sites

UF
archeological
sites
paleontology

RT's
BT 20P land pollution

protections - USE 42E safety features on equipment

40P protective clothing

UF
face masks
helmets

RT's
BT F10 filters
40E safety and health equipment

45P public health

RT's
BT 00M industrial medicine

public utilities - USE U00 electrical utilities

pulverizers - USE E60 preparation equipment

pulverizing - USE C30 coal preparation

purification - USE 15P pollution

pyritic sulfur - USE S60 sulfur

P50 pyrolysis	<u>UF</u> pyrolysis products pyrolytic oils	<u>RT's</u> CT5 chemical reactions BT P40 coal processing
pyrolysis products - USE P50 pyrolysis		
pyrolytic oils - USE P50 pyrolysis		
qualifications - USE P05 personnel		
qualified operators - USE P05 personnel		
quality assurance - USE Q00 quality control		
Q00 quality control	<u>UF</u> quality assurance quality requirements	<u>RT's</u> BT 15M monitoring T05 testing
quality requirements - USE Q00 quality control		
radiators - USE H05 heat		
radio - USE E30 communication equipment		
radiometric surveys - USE E75 exploration		
rail bed - USE T40 rail transport		
T40 rail transport	<u>UF</u> hopper cars locomotives railbed rolling stock	<u>RT's</u> BT T35 transport
rain - USE W05 weather		
rate of detonation - USE B05 blasting		
rated capacity - USE S36 specifications		
rated load - USE S36 specifications		
reapproval - USE A20 approval		
OAR recall	<u>UF</u> equipment recall materials recall	<u>RT's</u> BT OAM maintenance
recharge - USE 10W water		

OOR reclamation	<u>UF</u> backfilling contouring grading highwall reduction mine rehabilitation subsidence control topsoiling	<u>RT's</u> BT 20P land pollution 20R revegetation
	record retention - USE 05R reports and records	
	record review - USE 05R reports and records	
	recycling - USE M20 materials recovery	
	reflectors - USE 40E safety and health equipment	
	registration - USE 05R reports and records	
	remote sensing - USE E75 exploration	
RAO repairs	<u>UF</u> Teaks	<u>RT's</u> BT DAM maintenance
	reporting of results - USE 05R reports and records	
05R reports and records	<u>UF</u> accident reports MHSA approval list expression of results letters mine maps notification plats record retention record review registration reporting of results	<u>RT's</u> BT E25 enforcement OAS safe practices
10R rescue operations	<u>UF</u> mine rescue	<u>RT's</u> BT D00 disaster response technology
RBO research		<u>RT's</u> BT T05 testing
	research grants - USE F05 federal assistance programs	
R05 residues	<u>UF</u> coal refuse	<u>RT's</u> 25A ash C37 combustion byproducts BT 05W wastes

resistors - USE 10E electrical systems
resource assessment - USE R15 resources
resource conservation - USE 30C conservation
resource depletion - USE R15 resources
resource development - USE R15 resources
resource potential - USE R15 resources
resource recovery facilities - USE R15 resources

R15 resources	<u>UF</u>	<u>RT's</u>
	allocation	BT R10 coal resources
	energy resources	30C conservation
	mineral resources	
	resource assessment	
	resource depletion	
	resource development	
	resource potential	
	resource recovery	
	facilities	
	water resources	

respirable air - USE A05 air

15R respiration	<u>UF</u>	<u>RT's</u>
	breath	BT H10 HVAC
	exhalation	
	inhalation	
	respiratory systems	

respirator components - USE 40E safety and health equipment
respirators - USE 40E safety and health equipment
respiratory devices - USE 40E safety and health equipment
respiratory system diseases - USE 20D diseases
respiratory systems - USE 15R respiration
retirement - USE E20 employment

20R revegetation

UF
cultivation
grazing
fertilization
planting
seeding
sodding
soil preparation
species introduction

RT's
BT 20P land pollution
00R reclamation

revocation - USE P04 permits

right of way - USE S75 surface rights

R17 rights of entry

RT's
BT L05 legal aspects
05M mine permit areas
M30 mineral rights
S75 surface rights
W01 water rights

risk assessment - USE E05 economics

roads - USE T50 truck transport

rock bursts - USE R20 rocks

rock drills - USE R20 rocks

rock dusting - USE M45 underground coal mining

rock mechanics - USE R20 rocks

R20 rocks

UF
rock bursts
rock drills
rock mechanics
sedimentary rocks

RT's
G25 geological
structures
BT LA0 land

rolling stock - USE T40 rail transportation

roll-over bars - USE 42E safety features on equipment

roll-over protective structures (ROPS) - USE 42E safety features on equipment

roof bolting - USE M45 underground coal mining

roof control - USE M45 underground coal mining

rough handling - USE M15 materials handling

rubbish - USE 05H hazards

R25 rulings

RT's
BT A20 approval

runoff - USE 10W water

run-of-mine coal - USE C20 coal

runways - USE C39 construction

rust proofing - USE M17 materials processing

safeguards - USE 42E safety features on equipment

safe location of workers - USE OAS safe practices

safe locations - USE I24 installation of equipment

safe operations - USE OAS safe practices

OAS safe practices

<u>UF</u>	<u>RT's</u>
operational procedures	BT I20 coal industry
safe location of workers	05D detection
safe operations	D00 disaster response
signaling safe conditions	technology
technical procedures	20D diseases
	05H hazards
	00M industrial medicine
	00P plans
	05R reports and records
	42E safety features on equipment
	15W working conditions

safe work place - USE 15W working conditions

40E safety and health equipment

<u>UF</u>	<u>RT's</u>
air monitors	BT E40 equipment
alarm devices	00L labeling
alarm systems	0BP permissibility
brakes	40P protective
circuit-interrupting devices	clothing
dust, mist and fume respirators	15W working conditions
dust collectors	42E safety features
dust samplers	on equipment

40E safety and health equipment continued

indicators
flame detectors
flame safety lamps
gas masks
interlocks
life support systems
lightning rods
methane detectors
reflectors
respirator components
respirators
respiratory devices
safety flashlight
safety lamps
smoke detectors
supplied air respirators
tactile indicators
timer
visible gauges
warning devices

42E safety features on equipment

<u>UF</u>	<u>RT's</u>
cut-off valves	OOL labeling
enclosures	BT 40E safety and health equipment
falling-object protective structures (FOPS)	OAS safe practices
guards	
intrinsic safety limiters	
locking devices	
operator protection protections	
roll-over bars	
roll-over protective structures (ROPS)	
safeguards	

safety flashlight - USE 40E safety and health equipment

safety lamps - USE 40E safety and health equipment

sample preparation - USE SOO sampling

samplers - USE E45 laboratory equipment

samplers - USE SOO sampling

samples - USE SOO sampling

S00 sampling	<u>UF</u> bias	<u>RT's</u> BT 15M monitoring
	sample preparation	T05 testing
	samples	
sanctions - USE P01 penalties		
sand - USE S30 soils		
sapropelic coal - USE C20 coal		
scaffolding - USE C39 construction		
scheduled maintenance - USE M00 maintenance procedures		
schedules - USE P20 planning		
schools - USE 25C communities		
screening - USE C30 coal preparation		
scrubbers - USE 35E pollution control equipment		
scrubbing - USE 35E pollution control equipment		
OBS seasonal restrictions		<u>RT's</u> BT 25E environment
seat index point - USE 15H human factors design		
OCS security	<u>UF</u> closure gating locked storage locking locks	<u>RT's</u> M21 materials storage BT 15W working conditions
sedimentary rocks - USE R20 rocks		
sedimentation - USE S30 soils		
sediments - USE G20 geologic deposits		
seeding - USE 20R revegetation		
seepage - USE M45 underground coal mining		
seismic events - USE E00 earthquakes		
shaft excavations - USE M45 underground coal mining		

shelf life - USE M21 materials storage

shelter holes - USE M45 underground coal mining

shields - USE E55 underground mining equipment

T45 ship transport

RT's
BT T35 transport

shipment of materials - USE M15 materials handling

shock waves - USE B05 blasting

shortwall - USE M45 underground coal mining

shot firer - USE B05 blasting

signal circuit - USE 10E electrical systems

signalling devices - USE E30 communications equipment

signaling safe conditions - USE OAS safe practices

S05 sintering

RT's
BT P40 coal processing

size - USE S36 specifications

sizing - USE C20 coal preparation

slag - USE C37 combustion byproducts

slope stability - USE 20P land pollution

S20 sludges

RT's
BT C37 combustion
byproducts

S25 slurries

RT's
BT C20 coal
T35 transport

slurry pipelines - USE P10 coal pipelines

small business - USE E05 economics

smog - USE 10P air pollution

smoke detectors - USE 40E safety and health equipment

smoke - USE 10P air pollution

snow - USE W05 weather

social impact - USE O0I impact

social services - USE 25C communities

sodding - USE 20R revegetation

soil preparation - USE 20R revegetation

S30 soils

UF
sand
sedimentation

BT RT's
G20 geological
deposits
LA0 land

F25 solid and liquid fuels

UF
boiler fuels
fossil fuels
fuel gas
fuel slurries
interchangeability
liquid fuels
mineral fuels
suspension

BT RT's
C20 coal
F20 gas fuels
H15 hydrocarbons
F30 synthetic fuels

S35 solvent extraction

UF
SRC I
SRC II
SRC III

BT RT's
P40 coal processing
C25 solvent-refined
coal

C25 solvent-refined coal

BT RT's
C20 coal
S35 solvent
extraction

soot - USE 10P air pollution

space envelope - USE S36 specifications

sparks - USE 05H hazards

species introduction - USE 20R revegetation

S36 specifications

UF
capacity
description
design
drawings
energy absorption
factor
limits
limits of error

BT RT's
C40 contracts

S36 specifications continued

load
maximums
minimums
performance criteria
rated capacity
rated load
size
space envelope
tolerances
weight
workmanship

spoil banks - USE 20P land pollution

spontaneous combustion - USE 00F fires

SRC I - USE S35 solvent extraction

SRC II - USE S35 solvent extraction

SRC III - USE S35 solvent extraction

stack disposal - USE 10P air pollution

S40 stacks

RT's
BT P30 power plants

stairways - USE C39 construction

S45 static loads

RT's
BT T05 testing

stationary pollutant sources - USE 15P pollution

S50 steam

UF
steam generation BT RT's
steam generators H05 heat
steam lines

steam generation - USE S50 steam

steam generators - USE S50 steam

steam lines - USE S50 steam

steaming - USE M17 materials processing

steep slope operations - USE M40 surface coal mining

stemming - USE S52 stemming devices

stemming device wrappers - USE S52 stemming devices

S52 stemming devices

UF
stemming
stemming device
wrappers

BT RT's
B05 blasting
E77 explosives

stockpiles - USE S55 coal storage

stockpiling - USE S55 coal storage

stoichiometry - USE B10 burners

stokers - USE B10 burners

stores - USE M10 materials and supplies

storms - USE W05 weather

strata - USE G25 geological structures

sub-bituminous coal - USE C20 coal

subsidence - USE M45 underground coal mining

subsidence control - USE O0R reclamation

sulfate sulfur - USE S60 sulfur

S60 sulfur

UF
organic sulfur
pyritic sulfur
sulfate sulfur
sulfur compounds
sulfur content
sulphur

BT RT's
T0P air pollution

sulfur content - USE S60 sulfur

sulfur compounds - USE S60 sulfur

sulfur removal - USE T0P air pollution

sulphur - USE S60 sulfur

supplied air respirators - USE 40E safety and health equipment

supplies - USE M10 materials and supplies

S70 supply and demand

BT RT's
E05 economics

15S support facilities

RT's
BT M35 coal mining
E30 communications equipment
E10 electricity
E45 laboratory equipment
35E pollution control equipment

support pillars - USE M45 underground coal mining

supports - USE M45 underground coal mining

surface air - USE A05 air

surface buildings - USE C39 construction

M40 surface coal mining

UF
area mining
auger mining
bucket and wheel
excavations
contour mining
mine roadways
mountaintop removal
overburden
steep slope operations
surface mining

RT's
BT M35 coal mining
E50 surface mining equipment

D10 surface dust

RT's
BT 25D dust control

surface mining - USE M40 surface coal mining

E50 surface mining equipment

UF
backhoes
draglines

RT's
BT E40 equipment
M40 surface coal mining

S75 surface rights

UF
eminent domain
land entries
pipeline corridor
property seizure
right of way

RT's
BT R17 rights of entry

surface temperature - USE H05 heat

surface water - USE 10W water

surveys - USE E75 exploration

survivors - USE 20I health insurance

suspensions - USE F25 solid and liquid fuels

switches - USE 10E electrical systems

symbols - USE 00L labeling

symptoms - USE 20D diseases

F30 synthetic fuels

RT's
BT C20 coal
F25 solid and liquid
fuels

tactile indicators - USE 40E safety and health equipment

tamping - USE B05 blasting

tar - USE B00 coal-derived bituminous materials

technical procedures - USE QAS safe practices

telephone devices - USE E30 communications equipment

temperature gradients - USE T00 combustion temperature control

temperature measurement - USE T00 combustion temperature control

termination - USE E20 employment

test failure - USE OAF equipment failure

test instruments - USE T05 testing

test subjects - USE P05 personnel

T05 testing

UF	RT's
bench testing	05D detection
field testing	F00 federal test
man testing	procedures
materials testing	E45 laboratory
personnel examination	equipment
pressure testing	15M monitoring
proof load	BT 15P pollution
test instruments	Q00 quality control
test instruments	R00 research
	S00 sampling
	I00 impact shock
	S45 static loads

T10 thermal conductivity

RT's
BT H05 heat

T15 thermal degradation

RT's
E61 equipment
degradation
BT H05 heat

thermal effects - USE 25P water pollution

T20 thermal fatigue

RT's
BT H05 heat

T25 thermodynamic properties

RT's
BT H05 heat

threshold limit values - USE OAT threshold values

OAT threshold values

UF RT's
acceptable 20D diseases
concentrations 55E exposure limits
allowable
concentrations
threshold limit value

timbers - USE C39 construction

timers - USE 40E safety and health equipment

time in service - USE M00 maintenance procedures

tipple - USE 20P land pollution

TNT - USE E77 explosives

tolerances - USE S36 specifications

topsoiling - USE O0R reclamation

torbanite - USE C20 coal

toxic atmospheres - USE O0T toxins

toxic materials - USE O0T toxins

O0T toxins

UF RT's
antitoxins 05H hazards
toxic atmospheres 30I irritants
toxic materials

trailing cables - USE E35 electrical equipment

05T training

<u>UF</u>	<u>RT's</u>
cardio-pulmonary resuscitation	BT D00 disaster response
training	technology
CPR training	P05 personnel
education	
first aid training	
operator qualification	
operator training	
training aids and	
simulators	

training aids and simulators - USE 05T training

tramp metal removal - USE C30 coal preparation

T35 transport

<u>UF</u>	<u>RT's</u>
bulk shipping	T30 barge transport
	BT I20 coal industry
	P10 coal pipelines
	S55 coal storage
	HA0 haulage
	M15 materials
	handling
	T40 rail transport
	T45 ship transport
	S25 slurries
	T50 truck transport

trace element contamination - USE P40 coal processing

tremors - USE E00 earthquakes

triage - USE 05F first aid

trolley feeder wires - USE E35 electrical equipment

T50 truck transport

<u>UF</u>	<u>RT's</u>
roads	BT T35 transport

tunneling - USE M45 underground coal mining

tunnels - USE M45 underground coal mining

uncertified personnel - USE P05 personnel

M45 underground coal mining UF RT's
controlled BT M35 coal mining
cave-ins E55 underground
escapeways mining equipment
hydraulic mining
longwall
pressure flushing
rock dusting
roof bolting
roof control
seepage
shaft excavations
shelter holes
shortwall
subsidence
support pillars
supports
tunneling
tunnels
underground mining

underground disposal - USE 00W waste management

underground explosions - USE B05 blasting

underground mining - USE M45 underground coal mining

E55 underground mining UF RT's
equipment advance conditions BT E40 equipment
 sensors M45 underground coal
belt conveyors mining
boring machines
coal plows
continuous miners
impact ripping
machines
instrument-controlled
vehicles
lamps
longwall conveyors
manlifts
shields

underground storage - USE S55 coal storage

V00 vapors UF RT's
 fumes BT TOP air pollution

variances - USE A20 approval

vegetative cover - USE 35P populations

V05 ventilation

UF RT's
air circulation BT H10 HVAC
ventilation barriers
ventilation systems
ventilation vents

ventilation barriers - USE V05 ventilation

ventilation systems - USE V05 ventilation

ventilation vents - USE V05 ventilation

V06 violations

UF RT's
complaints E25 enforcement
PO1 penalties

visible gauges - USE 40E safety and health equipment

visibility - USE 15H human factors design

visual acuity - USE OAP human physical requirements

V10 volatility

RT's
BT OOF fires
15F flammability

voltage - USE E10 electricity

vocational rehabilitation - USE O1R personnel rehabilitation

vulcanization - USE M17 materials processing

warning devices - USE 40E safety and health equipment

warning labels - USE O0L labeling

washing - USE C30 coal preparation

washout - USE 15P pollution

waste disposal USE O0W waste management

waste heat - USE H05 heat

O0W waste management

UF RT's
underground disposal E80 extraction
waste disposal BT 05W wastes
waste processing
waste processing plants
waste product utilization
waste storage
waste transportation

waste processing - USE 00W waste management

waste processing plants - USE 00W waste management

waste product utilization - USE 00W waste management

waste storage - USE 00W waste management

waste transportation - USE 00W waste management

waste water - USE 10W water

05W wastes	UF	RT's
	gaseous wastes	BT 15P pollution
	industrial wastes	R05 residues
	liquid wastes	00W waste management
	organic wastes	
10W water	UF	RT's
	acid rain	BT 25E environment
	aquifers	25P water pollution
	drainage basin	
	drawdown	
	drinking water	
	feedwater	
	floods	
	groundwater	
	hydrology	
	irrigations	
	recharge	
	runoff	
	surface waters	
	waste water	
	water demand	
	water quality	
	water removal	
	water rights	
	watersheds	
	water treatment	
	water treatment plants	

water demand - USE 10W water

25P water pollution	UF	RT's
	impounding reservoirs	D05 drainage
	thermal effects	05E effluents
	water pollution	H05 heat
	abatement	L10 leaching
	water pollution	BT 15P pollution
	control	10W water
	water pollution	
	monitors	

water pollution abatement - USE 25P water pollution
water pollution control - USE 25P water pollution
water pollution monitors - USE 25P water pollution
waterproofing - USE M17 materials processing
water quality - USE 10W water
water removal - USE 10W water
water resources - USE R15 resources
water rights - USE 10W water

W01 water rights RT's
BT R17 rights of entry

water treatment - USE 10W water
water treatment plants - USE 10W water
watersheds - USE 10W water

W05 weather RT's
BT 25E environment

UF
atmospheric
precipitations
hail
lightning
rain
snow
storms
wind

weathering - USE 20P land pollution
weight - USE S36 specifications
weight of apparatus - USE 15H human factors design
wildlife - USE 10F fish and wildlife
wind - USE W05 weather
wiring - USE 10E electrical systems
witnesses - USE L05 legal aspects

15W working conditions

UF
confined spaces
enclosed areas
hot work

RT's
BT I20 coal industry
D00 disaster response
technology
15H human factors
design
00L labeling
L25 lighting systems
M21 materials storage
P05 personnel
OAS safe practices
40E safety and health
equipment
OCS security

20W workers compensation

RT's
20C claims
E20 employment
BT I26 insurance

W10 working fluids

UF
antifreeze
hydraulic fluids

RT's
BT F15 fluids

workmanship - USE S36 specifications

wounds - USE 10I injuries

wrapper-to-explosive ratio - USE B05 blasting

wrappers - USE B05 blasting

zone of danger - USE 05H hazards

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10. SUPPLEMENTARY NOTES

 Document describes a computer program; SF-185, FIPS Software Summary, is attached.

11. ABSTRACT (A 200-word or less factual summary of most significant information. If document includes a significant bibliography or literature survey, mention it here)

This report contains a thesaurus to help public and private users find and retrieve information on regulations and standards which apply both to coal technologies and coal-related environmental, safety and health issues. Document indexers may also find it helpful. The thesaurus was designed to be structurally compatible with the document storage and retrieval systems now in use by the Department of Energy (DOE) so that absorption into DOE's system could be convenient and practical. The arrangement of the thesaurus, the code system that represents the terms used in the indexing and search processes, and instructions for its use are described. The hierarchies of index terms in the thesaurus are illustrated.

12. KEY WORDS (Six to twelve entries; alphabetical order; capitalize only proper names; and separate key words by semicolons)

coal; environment; health; index; safety; taxonomy; technology; thesaurus; terms

13. AVAILABILITY

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